

In the Claims

The following Listing of Claims replaces all prior versions in the application:

LISTING OF CLAIMS

1. (Currently amended) A Device for automatically ~~centring~~ centering a laser beam in a light guide, ~~the (32), this device being comprising:~~

~~characterised in that it comprises a volume scatterer (2) including comprising an entry face for the laser beam, the volume scatterer being configured and designed to scatter this the laser beam and automatically ~~centre~~ center it in the light guide.~~

2. (Currently amended) A Device for automatically ~~centring~~ centering a laser beam in a monomode or multimode optical ~~fibrefiber, the (32), this device being characterised in that it comprises comprising:~~

~~a volume scatterer (2) comprising including an entry face for the laser beam, the volume scatterer configured and designed to scatter this the laser beam and automatically ~~centre~~ center it in the optical ~~fibrefiber~~.~~

3. (Original) Device according to claim 1, in which the thickness (L) of the volume scatterer (2) is equal to at least 100 times the wavelength of the laser beam.

4. (Original) Device according to claim 1, in which the volume scatterer (2) is made of polytetrafluorethylene.

5. (Original) Device according to claim 1, in which the volume scatterer (2) is cylindrical.

6. (Original) Device according to claim 1, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (6, 14) that surrounds this side face.

7. (Original) Device according to claim 1, also comprising a lens (10) placed on the entry face of the volume scatterer (2) and designed to defocus the light beam on this entry face.

8. (Original) Device according to claim 1, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (14) that surrounds this side face, and is prolonged beyond the entry face and guides the light beam as far as this entry face.

9. (Currently amended) Device according to claim 1, also comprising an auxiliary optical ~~fibre~~ fiber (16) that is optically coupled to the entry face of the volume scatterer (2) and guides the light beam as far as this entry face.

10. (Currently amended) A method for manufacturing a device for automatically centering a laser beam in a light guide, the device including a volume scatterer comprising an entry face for the laser beam, the volume scatterer being configured to scatter the laser beam and automatically center it in the light guide, the method comprising: ~~Method of manufacturing the device according to claim 1, in which~~

manufacturing a tubular light guide (6) ~~is manufactured;~~ and
making the volume scatterer (2) ~~is made~~ from a material (34) capable of scattering light, using the tubular light guide as a cutting punch.

11. (Original) Device according to claim 2, in which the thickness (L) of the volume scatterer (2) is equal to at least 100 times the wavelength of the laser beam.

12. (Original) Device according to claim 2, in which the volume scatterer (2) is made of polytetrafluorethylene.

13. (Original) Device according to claim 2, in which the volume scatterer (2) is cylindrical.

14. (Original) Device according to claim 2, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (6, 14) that surrounds this side face.

15. (Original) Device according to claim 2, also comprising a lens (10) placed on the entry face of the volume scatterer (2) and designed to defocus the light beam on this entry face.

16. (Original) Device according to claim 2, in which the volume scatterer (2) comprises a side face and the device also comprises a light reflector (14) that surrounds this side face, and is prolonged beyond the entry face and guides the light beam as far as this entry face.

17. (Original) Device according to claim 2, also comprising an auxiliary optical fibre (16) that is optically coupled to the entry face of the volume scatterer (2) and guides the light beam as far as this entry face.

18. (Currently amended) Method of manufacturing ~~the~~ a device for automatically centering a laser beam in a monomode or multimode optical fibre, the device including a volume scatterer having an entry face for the laser beam, the volume scatterer being configured to scatter the laser beam and automatically center it in the optical fiber, the method comprising: ~~according to claim 2, in which~~

manufacturing a tubular light guide (6) is manufactured; and
making the volume scatterer (2) is made from a material (34) capable of scattering light,
using the tubular light guide as a cutting punch.

19. (New) A device according to claim 1, wherein the volume scatterer is made from a material selected as a function of an absorption coefficient that is as small as possible.

20. (New) A device according to claim 2, wherein the volume scatterer is made from a material selected as a function of an absorption coefficient that is as small as possible.

21. (New) A device according to claim 19, wherein the thickness of the volume scatterer is at least about 100 times the wavelength of the laser light.

22. (New) A device according to claim 20, wherein the thickness of the volume scatterer is at least about 100 times the wavelength of the laser light.